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# ABSTRACTS OF LECTURES ON THE PSYCHOLOGY OF TESTIMONY AND ON THE STUDY OF INDIVIDUALITY<sup>1</sup>

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## FIRST LECTURE

### *The Psychology of Testimony*

I. *Introduction.* Applied Psychology in General. Along side of the purely theoretical psychology, which seeks a knowledge of the elements and laws of the mental life, there is now springing up, as an independent science, an "Applied Psychology." Its purpose is to gather such psychological information as will serve other sciences and especially the practical cultural activities of Education, Law and Medicine. In each of these fields Applied Psychology has a double task: As "Psychognostics" it must provide a scientific basis for practical knowledge of, and judgments upon, human mental acts and qualities; and as "Psychotechnology" it must give assistance in the practical manipulation of human minds.

An uncritical overestimation of this new science (psychologism) is as unreasonable as its underestimation.

A cardinal error, committed especially in the earlier days of this new science, was the attempt to carry over into it unchanged the methods of pure psychology; the thought was to apply the customary laboratory experiments (which, of intention, bring into artificial isolation the elementary psychical functions and are therefore remote from daily experiences) unaltered in the schools and in the courts, whereas the altered setting of the problem requires of course altered methods. Practical life does not deal with elements, but with very complex mental processes; the special methods of applied psychology must therefore take a middle position; they must combine the necessary nearness to life with that degree of exactness which is indispensable for the drawing of reliable inferences.

The Psychology of Testimony offers an illustration of these methodological points of view.

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<sup>1</sup>Lectures delivered at the Celebration of the Twentieth Anniversary of the opening of Clark University, Sept., 1909; abstracts prepared in German by Professor Stern, and translated by E. C. Sanford.

2. *The Methods of the Psychology of Testimony.* By "Testimony" or "Report" (*Aussage*) we mean the verbal expression of a recollection; and by "Recollection" (*Erinnerung*) a complex of memorial ideas which has reference to a definite objective constellation of facts (*Tatbestand*) in the past. The chief purpose of the study of testimony is the determination of its accuracy, *i. e.*, the degree of its agreement with the actual constellation of facts, and of the conditions upon which this accuracy depends. All experimental methods must therefore permit a comparison of the testimony with the facts to which it relates. Pictures to be carefully examined and then later described from memory furnish the most convenient material and have been most frequently used so far; but since in practical life one has very often to do with reports regarding events, event-experiments (*Vorgangsexperimente*) have also been arranged. Besides these, reports of narratives, of extents of time and space and many other matters have also been worked with.

The comparison of the facts and the report can be made only when the latter has been analyzed into its single statements (*Einzelangaben*) and the percentage of right, wrong and indeterminate statements has been calculated; and, because of the varied character of the statements, it is necessary to calculate separately the proportions for particular categories (*e. g.*, with reference to matters of color or of space relations) as well as to make a general calculation.

Next the conditions affecting the accuracy of the reports must be varied experimentally. The most important difference is here between the "narrative" (*Bericht*) and the "interrogatory" (*Verhör*, testimony given in response to questions, Whipple's "deposition"). In the case of the "interrogatory" form there are also different degrees of suggestion to be considered. Then the interval between the original observation and the report is to be varied; and finally the dependence of the accuracy of the report on the education, age and sex of the person under investigation is to be determined.

3. *Numerical Results.* The first experiments were made with pictures on mature students, both ladies and gentlemen. The reports were in the "narrative" form, without interrogation. The errors in the report, when made immediately after the observation, amounted to 5%, some weeks later to 10%. To distinguish those portions of the report with reference to which the subjects were very certain—so certain that they would be willing to take oath upon them—such portions were underscored. These portions showed a lessened tendency to error, but were not free from it.

A further experiment, with the picture of the living room

in a peasant's house, was made upon children and young people of different ages; and has often been repeated since. The "narrative" resulted in 5-10% of errors; the "interrogatory" in 25-30%. The power of the "suggestive" question showed itself to be dependent in large measure on age—50% of errors in the case of 7-year-olds, 20% in that of 18-year-olds.

An event-experiment was made in my seminar as follows: My lecture was interrupted by the entrance of a gentleman who spoke with me and took a book from the book-case, the performance having been exactly studied beforehand in all its details. The members of the seminar gave but little attention to what was going on. A week later they were required to report upon what had taken place. Result: "narrative" 25% of errors; "interrogatory" 50% of errors.

4. *On the Psychology of the "Narrative" Errors.* These errors fall into four groups:

a. *Errors of Apprehension*, committed during the observation: Overlooking of elements present; misapprehension in consequence of expectation or habituation (*falsche Assimilation*); Sense illusions, Errors of estimation.

b. *Real Errors of Memory*, arising in the interval between the observation and the reporting or in the course of the report: Filling up gaps in recollection in accordance with habit; The use of retained verbal expressions in an altered sense; Gradual amplification of the idea—thus, with reference to two trees in a picture the statement in the first report was "two trees," a week later "a grove," a week later still "a forest."

c. *Errors of Phantasy*: Retouching of the recollection (*Ausschmückung*); Unintentional blending of the imagined with the experienced, or of the experiences of different times; In the case of children, often a quite harmless playing with the report, or invention (*Fabulieren*).

d. *Lack of Will*: Too great credulity with reference to the ideas which offer themselves; too little self-criticism in the case of uncertain recollections.

## SECOND LECTURE

### *The Psychology of Testimony*

5. *The Psychology of the Errors in Interrogatory Reports.* Beside the errors which have their sources within the reporting subject, there are others which have an outside source, in particular in the interrogation (*Verhör*). In one way questioning is an excellent means of filling the gaps in a spontaneous report, but in another it is, as experiments prove, a possible

occasion of falsification. The more dependent and easily influenced a man is, the more a question put to him operates as an imperative: You have to know something about this. And as he has usually exhausted in his narrative his store of clear and distinct ideas with reference to the experience, he hunts now among the remaining indistinct and fragmentary recollections for something wherewith to meet the question. This is true of all questions, but in an increased measure of *suggestive questions*, i. e., of those for which a particular answer is readier than others. For the question, "Was the cloth not red?" the answer "Yes" is always readier than the answer "No." The naïve human being is much inclined to affirm any idea presented to him, that is, to credit it with an objective existence. Suggestive questions of this sort operate with especial force in the case of young and uneducated persons; more with women than with men.

The suggestive question is only a special case of suggestion in general, the importance of which in normal psychology has only recently begun to be recognized. We define suggestion, from the standpoint of the person influenced, as "the imitative assumption of a mental attitude under the illusion of assuming it spontaneously" (*Nachahmung einer Stellungnahme unter dem Scheine des eigenen Stellungnehmens*).

Besides the influence of interrogation there are still others which falsify testimony: hearsay, reading about the occurrence, discussion with others who have shared the experience, etc.

6. *Practical Consequences for Pedagogy.* These are of a threefold sort:

a. In school and at home one has constantly brought before him reports by children as to experiences which they have had or stories which they have heard. It is clear that these reports are not worthy, off-hand, of full credence; the above mentioned sources of error must be reckoned with. It is clear also that a report demonstrably false is not necessarily to be regarded as a lie and punished accordingly. The unconscious factors of falsification play a far greater rôle than is commonly supposed; and if one condemns in the case of little children every mistake and every harmless tale of fancy as a lie, he usually succeeds in giving to the child in this way a conception of which the child would otherwise perhaps have remained in ignorance.

b. Since a large part of the falsification in the report is usually a result of questioning, the questioner is himself co-responsible for the false report of the child. These falsifications are for the most part unconscious; and yet they may, under certain circumstances, give place to conscious falsifications, since the child sometimes knows no other way of escaping

the disagreeable compulsion of the question than the invention of an answer. One should therefore interrogate no more than is absolutely necessary and should formulate his questions as "unsuggestively" as possible.

c. Since memory is such an important function it is natural to ask whether we must rest satisfied with its demonstrated imperfection. Is it not possible to secure an improvement by pedagogical means? The question is to be answered affirmatively; just as observation (*Anschauung*) can be systematically cultivated, so can memory. The improvement is subject to experimental demonstration; experiments repeated on the same children (each time of course with a new picture) showed a clear improvement. The chief educative effect was in this case due to *self-correction*. After the making of the report the picture was shown again to the child and he was required himself to discover the errors which he had made. Such exercises of memory may be scattered through the work upon any school topic as opportunity offers.

7. *Practical Consequences for Law.* (The consequences here mentioned have reference in the first instance to German jurisprudence and court procedure. To what extent analogous points of view hold also for American conditions those familiar with the latter must decide.)

a. The first and obvious consequence of the psychology of testimony is a negative one, a diminution of the reliance which is to be placed in the reports of witnesses. The notion, still tolerably prevalent, that the faithfully sworn testimony of a mentally competent witness is in general to be regarded as an exact presentation of reality, is without justification. In Germany the new view has already caused the testimony of children especially to be less highly valued than formerly.

It would be a mistake, however, to ascribe to the psychology of testimony destructive consequences only; its *positive consequences* are still more important.

b. The examining officer is able by the manner of his questioning to predetermine in a measure the degree of the erroneousness of the testimony. The more he leaves to spontaneous narration, and the less "suggestive" his questions, the less will be the danger of falsification.

c. When identification is necessary the witness should make it, whenever possible, by choice from a group of similar persons or things (*Wahlkonfrontation*) and not by indicating whether a single individual presented to him is the one in question (*Einzelkonfrontation*), because of the powerful "suggestive" effect of the latter procedure.

d. Psychological experiment shows what degree of confidence ought in general to be placed in particular classes of

testimony. It teaches, for example, that colors to which particular attention has not been given are especially ill remembered; that times of a few minutes are almost always considerably over-estimated; that the main outlines of an event, if they have been followed with attention and if the witness has not shared especially in the emotions involved, are commonly correctly reproduced; that on the contrary, things observed without attention are very liable to distortion. (For this reason delayed reports with reference to the appearance or clothing of a person not carefully observed are for the most part worthless.)

e. As the psychological study of testimony advances it will become possible for experts of psychological training in *exceptional cases* to offer opinions on the psychical character of important witnesses; the experimental testing of witnesses also, *e. g.*, with reference to their capacity to observe, their suggestibility, their ability to estimate extents of time and space, their memory for colors, seems at least in principle, possible; though, so far, psychological methods are not ripe for it.

f. The best thing of all is, of course, that the jurist himself should be a psychological expert; for this reason it is before all else desirable that jurists should be thoroughly trained in applied psychology and its methods and results. A jurist who has himself been the subject of experiment and thus has seen in his own case how memory functions and how the answering of questions (*Verhörsfragen*) is actually performed, as well as on what conditions these operations depend, will profit from the experience in the technique of his own questioning.

g. The testimony of adolescents and children demands special consideration. While the juvenile offender before the court receives a wholly different treatment from the adult, the juvenile witness is not thus distinguished. It is not borne in mind that the usual procedure of interrogation greatly diminishes the value of child testimony and at the same time puts the juvenile witness in moral peril. The introduction of special investigating magistrates (*Untersuchungsrichter*) for juvenile witnesses, before whom the children should be examined but once and then as soon as possible after the event, is to be desired.

8. *Literature.* The most important titles in the literature of the Psychology of Testimony, as well as collective reviews of it, are to be found in W. Stern's *Beiträge zur Psychologie der Aussage*, 2 vols., Leipzig, 1903-6, and in its continuation, the *Zeitschrift für angewandte Psychologie*, edited by Stern and Lipmann since 1907. In America G. M. Whipple gives in the *Psychological Bulletin*, VI, No. 5, May, 1909, a collective review with bibliography; and a very extended bibliography has also been brought together by Wigmore in the *Illinois Law Review*, III, Feb., 1909.

## THIRD LECTURE

*The Study of Individuality: General, Psychography*

1. *Problems.* In addition to the main problem of Psychology (the investigation of the general uniformities of the mental life) two others now begin to engage attention, which until recently, have been left almost wholly to other disciplines.

*The Question of Differences (differentielle Fragestellung)* deals with the variations in the particular mental functions. Each may be studied with reference to the degree of its general variability; its qualitative differentiation into "Types," its quantitative differentiation into grades, its genetic differentiation into developmental stages, its relative variations in comparison with other functions, *i. e.*, its correlation.

*The Question of Individuality (individuelle Fragestellung)* has to do with the knowledge of a single individual personality in and for itself, whether in relation to its total psychical make-up or in relation to a particular aspect, as character, intelligence, etc.

The study of individuality has, up to the present, been a matter either of the historical sciences (biography) or of certain practical disciplines (lists of individualities in schools, alienists' tests of intelligence, characterological indications of the graphologists and the like). There is needed, however, both from a philosophical and from an empirico-methodological point of view, a general scientific foundation for all these undertakings.

2. *The Philosophical Basis of the Concept of Individuality* can here be merely indicated,—for details confer W. Stern's *Person und Sache, System der philosophischen Weltanschauung*, I, and his *Psychologie der Individualität*, to appear in 1910. It is impossible to take an individuality merely as an aggregate of contents of consciousness; for, on the one hand, that which appears in consciousness is by no means identical with the real and essential kernel of individuality; and on the other, the multiplicity of the psychical content is combined into a single organic whole which can be explained only by a unitary purposeful principle of activity (*aus einem einheitlichen zielstrebigem Tätigkeitsprinzip*). Every individuality is therefore a "person" in the sense of the following definition: "A person is such an existence as, in spite of the multiplicity of its parts, presents a real unity, having a character and a value of its own; and as such exhibits, in spite of a multiplicity of subordinate functions, a unitary and purposeful self-activity." (*Person ist ein solches Existierendes, das trotz der Vielheit der Teile eine reale eigenartige, eigenwertige Einheit darstellt, und als solche trotz der Vielheit der Teilfunctionen eine einheitliche, zielstrebig, Selbsttätigkeit vollzieht.*)



The source of the individual character is to be found neither alone in what is innate (Nativism), nor alone in the operation of outer conditions (Empiricism); but on the contrary, every single phenomenon arises through "convergence of outer and inner factors" (the Convergence Theory).

Since, therefore, the inner capacity of a personality is but a single conditioning factor, which must be supplemented by others, it may properly be called a "Disposition." The disposition of an individual shows itself in a series of single tendencies and capacities which fall into two chief groups; that of the *innate tendencies* (*Anlagen*, developmental tendencies), and that of the *characteristics* (*Eigenschaften*, *Beharrungstendenzen*).

3. *Methodological.* New methods for the empirico-psychological investigation of individuality are now being worked out at different places in Europe. The correlation of psychical characteristics is being studied by Spearman and Kruger and by Heymans; Heymans, Sommer and others are engaged upon inheritance of psychic characteristics, the study of families and the like; in England the recently founded Eugenics Laboratory is especially devoted to this problem. With the problem of the mental endowment and intelligence of school children are busy Binet, Meumann, Stern and others. "Pathography," the analysis of distinguished personalities from a psychopathological point of view, has been developed by Möbius and his followers. "Psychography," as the common foundation of all the methods of individual psychology, is being worked out in our *Institut für angewandte Psychologie*.

4. *Problem and Tendency of Psychography.* All studies of individuality so far suffer from one common defect: The selection of the characteristics and attitudes which have been tested in the individuals examined has been a matter of chance, dependent on subjective preference or preconceived meaning on the part of the investigator. Each biographer has reported particular marks as "essential" for the characterization of his hero; the rest he has disregarded or merely touched upon. No two alienists have made use of the same experiments for testing the intelligence of their patients; arbitrarily selected individual functions have been regarded as symptomatic. Of like arbitrary selection are all the lists of "mental tests" so far proposed; and accident has in the same way determined the rubrics of the "individuality books" and the lists that have been made use of in many schools. The collection of such lists, questionnaires and formularies of individuality, brought together in the Berlin *Institut für angewandte Psychologie*, shows that a veritable chaos reigns in this matter and that in

consequence a comparison of the tests of individuality made use of by different observers is nearly impossible.

It has seemed to us, therefore, a precondition of all further work in this field that a "Scheme of Psychography," of as complete a kind as possible should be worked out, *i. e.*, "a list, arranged in a synoptical manner, of all those characteristics which can in any possible way come into consideration in the study of individuality, without reference to *à priori* assumptions as to whether or not they are essential or to the special purposes of particular studies of character."

The Scheme has not been brought to a point at which each student of individuality may simply fill it out for the personality which he is studying; it furnishes, rather, the stock from which he may select the procedure appropriate to his object. But he must now give account to himself as to why he chooses just the particular points which he does and omits others; and he will take into consideration many points of which he would not otherwise have thought. The Scheme will further be indispensable in all genuine psychological investigations of individuality, correlation, inheritance and the like.

The Scheme must, of course, be completely *neutral*, *i. e.*, it must include the points of view of the historian, the alienist and the educationist as well as that of the psychologist; it must also make specific, for the study of supernormal endowment, the point of view of artistic creation, of scientific production, etc. It is easy to see that such an undertaking can only be carried through by the co-operation of many workers of many professions. The *Institut für angewandte Psychologie* has therefore formed a Commission for Psychography by which recently, after many years of work, a beginning of publication has been made. ("Ueber Aufgabe und Anlage der Psychographie" and "Fragment eines Schemas der Psychographie" in the *Zeitschrift für angewandte Psychologie*, III, Heft. 3.)

The trend of the Scheme is as follows: When an individual is to be "psychographed," a sharp distinction must be made between the "attitudes" (*Verhaltensweisen*) to be observed directly and the "characteristics" (*Eigenschaften*) to be inferred from them. The catalogue of attitudes falls again into two groups, according as we have to do with "*natural*" attitudes or those under *experimental* conditions. (Just these natural attitudes resist all schematization as yet; nevertheless they are, on the one hand, the chief material of biographical-historical studies, and, on the other, in the case of psychographing a living individual who can be subjected to experiment, indispensable for completeness. In view of this, the Scheme must try to formulate more exactly the data with reference to natural attitudes in such a manner that they may appear as reactions to

definite stimuli occurring in the course of life, *e. g.*, the attitude toward money, attitude toward affairs, attitude toward extraordinary occurrences.) Finally the Scheme must possess in the greatest possible fullness rubrics covering the *Ætiology* and *Symptomatology* of the individual to be psychographed. *Ætiology*: Data with reference to inheritance, diseases, character of the family, influences of nurture and education, etc. *Symptomatology*: Data with reference to physical form, body mass, physiognomy, expressive movements, voice, etc.

At the start the Scheme will of course contain many *lacunæ* which can be discovered and filled only as it is actually put to use; it is therefore desirable that for the immediate present the Scheme should be put to the test of varied application—historical, psycho-pathological, pedagogical, psychological.

#### FOURTH LECTURE

##### *The Study of Individuality: The Individuality of the Child*

1. *The Little Child.* The conditions for the thorough study of individuality are most favorable in the case of the child during his first six years; for then uninterrupted observation is possible for the parents; then the outer influences can be followed without break, and the empirical and nativistic elements of development can be clearly separated; the expressions of the mental life are still relatively simple; and the children are unconstrained before the observer. In these studies of little children a change from the method so far pursued is desirable, and in this direction, namely: parents must give themselves more and more to co-operative work in observation. The usual limitation to the first three years of life should be given up; many functions begin to show their most interesting development only between the fourth and sixth years. Observation, moreover, should not be confined alone to the most elementary functions; the development of feeling and of character, play, drawings, thought, children's views of the world, and many other matters must be described just as minutely. The various observers must work more from common points of view in order that their results may be more readily comparable. (With this object in view the *Institut für angewandte Psychologie* is beginning to issue a series of guides to the observation of child development.)

2. *The Child of School Age.* Here can be mentioned but one of the most important problems, which requires the close co-operation of Pedagogy and Psychology: *In what way should the organization of the schools and classes be adapted to the differences in the individuality of the children?* So far the organization of the schools has been undertaken almost exclusively

from the objective points of view of the differences in social station and of future calling. Along with these a psychological method of regarding the matter is now beginning to have influence.

3. *The Differences of the Sexes.* The segregation of boys and girls in separate schools has always been undertaken chiefly on non-psychological grounds; and the supporters of co-education have likewise on their part been persuaded that fundamental psychic differences do not exist. Certain psychological experiments seem to confirm this; but these again have been made upon elementary functions, and in these the true differences do not come to light. Studies dealing with complex and higher forms of activity (the relation of receptivity to spontaneity, the direction of interests, spontaneous drawings) show unquestionable differences, which cannot be attributed to influences of the outer *milieu*, but must be regarded as innate. The rhythm and tempo of development also are different in the two sexes.

As co-education is practiced in America to a greater extent than elsewhere, the opportunity for a purely psychological study of the problem is especially favorable.

4. *Organization with Reference to Grade of Endowment.* Differences in the intelligence of children were first recognized in school organization when schools for backward children (*Hilfsschulen*) were introduced. The great mass of "normal" children, however, remained still undifferentiated, though they show extremely marked differences in endowment. The fact that there is "repeating" (the necessary repetition of a grade's work) shows clearly that a certain percentage of the pupils always falls behind the requirements of the class. This circumstance caused Schulrat Sickinger of Mannheim to arrange special classes for these less well endowed pupils. These classes (called *Sonderklassen* or *Forderklassen*) have a less amount to do, fewer pupils per class and a different course of study. They have already been initiated in the larger cities of Germany and seem to justify themselves.

5. *Binet's Tests for Establishing a Scale of Intelligence.* The practical efforts to classify children according to grade of endowment just mentioned demand, however, that reliance should not be placed on the unsupported judgment of the teacher, but that more exact means of determining the capacities of the children should be secured. Many efforts have been made to establish "tests," but all so far have gone to pieces, as far as their main purpose was concerned, for the following reasons: Too much was attempted; it was thought that one might secure by a short series of experimental probings, in a very brief time, a total picture of the individuality.

The list was limited (especially in the older series of tests) far too much to the elemental functions of sense perception, reaction times, mechanical memory, etc., though just these functions are far less characteristic of the special features of individuality than the complex functions. In the case of the complex functions again, it is very hard to separate the actual *capacities* of intelligence (*Intelligenzanlagen*), which it is desired to test, from the objective effects of instruction, training, etc. Thus, for example, many of the alienists' so-called tests of intelligence are really tests of information and scholastic attainment.

It seems, however, that Binet, who has, for more than a decade, been making unwearied studies of the intelligence of school children (cf. the general review by Bobertag, *Zeitschrift für angewandte Psychologie*, III, Heft. 3), has now at last hit upon a practicable method. Its chief advantage consists in this that Binet has determined empirically which of his tests correspond normally to the ability of children at different ages. He is thus in a position to grade each child according to his intelligence-age (*Intelligenzalter*) and thus to say whether his actual age corresponds to this intelligence-age, or whether the child is ahead in his development by one or two years, or behind. It is even possible in this way to assign to the adult feeble-minded their mental level by comparison with the corresponding age of children. Binet has tried to arrange his tests in such a way that they are as independent as possible of acquired knowledge. While he has not attained perfect success, it has been possible, nevertheless, to apply his method with few changes to German children, though in their case the external conditions of instruction are in some respects wholly different. It would seem, therefore, that we are here on the way to a generally applicable method of testing grades of intelligence.

6. *Supernormal Endowments.* Children who differ from normality on the side of excess have so far received the very least consideration from a psychological and pedagogical point of view. Though the supernormal are relatively few in number, their significance for society and human progress is very great. Many "infant prodigies" (*Wunderkinder*) come to early injury in mind and body because they are thoughtlessly forced into publicity. In the schools, on the other hand, exceptional talents may remain undiscovered, because they cannot reveal themselves in the school machine, which must be adapted to the average; and thus they run the risk of degeneration. Kerschensteiner has discovered such instances in the case of artistic endowment. Finally the schools are dangerous for those of exceptional powers because such children do not have

to bring their powers to maximal tension; they do not have to steel their wills and train their sense of duty.

In this case, as before, preliminary pedagogical and psychological work must be done. Supernormal young people must be psychographed with the greatest precision and with reference to every sort of endowment. The significance of inheritance, *milieu*, and education in their development must be determined. We must discover whether there is not possible, even in early life, a clear differentiation between "infant prodigies" in the strict sense (*i. e.*, children with accelerated development, who later soon come to a standstill) and real child geniuses, like Mozart, who afterward as adults retain their supernormality. Finally, the correlation between different sorts of supernormal endowments must be studied, and that between supernormal endowment and general intelligence.

From the practical point of view there must be roused in society the conviction that it has special duties not only toward the mentally inferior, but also toward the mentally superior. Proposals have already been made with this in view which must be tested: Separate classes in the common schools for specially brilliant pupils; élite gymnasia, with wholly different courses of study and different requirements, for picked groups of those most exceptionally talented, without reference to family or property; legal measures to protect the "infant prodigies" from exploitation and to secure for them, remote from publicity, suitable training in their specialties combined with general education.